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PART--I-- Orders and Notifications by the Government of Tripura, The High Court, Government Treasury etc.

GOVERNMENT OF TRIPURA
HOME DEPARTMENT

No.F.47(4)-PD/06(Loose-I)/1497 Dated, Agartala, the 26th May, 2023

NOTIFICATION

In exercise of the powers conferred by the proviso to Article 309 of the Constitution of India, the Governor of Tripura hereby makes the following rules regulating the method of recruitment and educational & other qualification required for recruitment to the post of Junior Forensic Digital Analyst for Cyber Forensic Division in the State Forensic Science Laboratory, Tripura under Home Department, namely:-

1. **Short title & commencement**:-

(i) These rules may be called the **Junior Forensic Digital Analyst (Cyber Forensic Division) Recruitment Rules, 2023**.

(ii) They shall come into force on the date of their publication in the Official Gazette.

2. The name of the post shall be as specified in Column-1 of the Schedule annexed hereto.

3. **Number, Classification and scale of pay**:

The number of the said post, its classification and the scale of pay attached thereto shall be as specified in Column 2 to 4 of the said Schedule.

4. **Method of recruitment, age limit, qualification etc:**

The method of recruitment to the said post, age limit, educational qualifications and other matters relating to the said post shall be as specified in columns 5 to 13 of the said schedule.

5. **Disqualification** :- No person.

(a) who has entered into or contracted a marriage with a person having spouse living:

OR

(b) who, having a spouse living, has entered into or contracted a marriage with any person,

shall be eligible for appointment to the said post:

Provided that the State Government may, if satisfied that such marriage is permissible under the personal law applicable to such person and the other party to the marriage and that there are other grounds for so doing, exempt any person from the operation of these rules.

6. **Power to relax:-**

Where the State Government is of the opinion that it is necessary or expedient to do so, it may, by order, for reasons to be recorded in writing and in consultation with the Tripura Public Service Commission, may relax any of the provisions of these rules with respect to any class or category of persons.

7. **Saving:-**

Nothing in these rules shall effect reservations, relaxation of age limit and other concessions required to be provided for the Scheduled Castes, the Scheduled Tribes, Ex-servicemen and other special categories of persons in accordance with the orders issued by the State Government from time to time in this regard.

8. **Interpretation:-**

If any question arises as to the interpretation of these rules, it shall be referred to the Home Department, Government of Tripura, whose decision thereon shall be final.

By order and in the name of the Governor,

26/05/2023

(S. Chakraborty)
Deputy Secretary to the
Government of Tripura

SCHEDULE

1.	Name of the post(s):	**Junior Forensic Digital Analyst (Cyber Forensic Division),**
2.	Number of post(s):	02(two) plus additional post(s) as and when created.
3.	Classification:	Group-B (Gazetted).
4.	Scale of pay:	Rs. 42,900/- of Level-12 of Tripura State Pay Matrix-2018 (Pre-revised PB-3, Rs. 10230-34800/-, Grade Pay Rs. 4600/-) subject to revision by the State Government from time to time.
5.	Method of recruitments whether by direct recruitment or by promotion or transfer on deputation and percentage of the vacancies to be filled by various methods:	(i) 80 % by direct recruitment on the basis of competitive examination to be conducted by Tripura Public Service Commission (TPSC). (ii) 20% by promotion. In case of direct recruitment by TPSC, selection is to be made on the basis of written examination followed by interview in which the marks distribution for written test and interview have been made as per the New Recruitment Policy for Group-B posts under administrative control of Govt. of Tripura notified vide letter No.F.20(1)-GA(P&T)/18 dated 05.06.2018 & 29.10.2020. Scheme of examination for recruitment along with the syllabus and marks distribution for written examination (at least 85%) & interview (maximum 15%) are enclosed in **Annexure-A.** (iii) No. of written qualified candidates called for interview as per norms. (iv) Candidate(s) must have appeared in the interview for final recommendation. (v) Final selection will be made on merit list after adding the marks of written and interview.
6.	Age limit for direct recruitment:	Age not less than 18 years and not more than 40 years. Relaxable by 05 years in case of ST/SC/PH candidates and Government servants.
7.	Educational and other Qualification required for direct recruitment:	**Essential:-** Master Degree in Computer Science and Engineering or M.Sc. (Computer Science) or Master in Computer Application or M.Sc. Forensic Science with PG Diploma in Computer Application or M.Sc. Physics with PG Diploma in Computer Application from a recognized University with 50% marks. **Desirable:-** Knowledge of Bengali or Kokborok.

8.	Whether age and Educational qualification prescribed for the direct recruitment will apply in case of promotion:	Age – No Educational qualification - Yes.
9.	Whether Selection post or Non-selection post:	Selection.
10.	Period of probation, if any:	2(two) years.
11.	In case of recruitment by promotion / deputation / transfer, grades from which promotion / transfer / deputation is to be made.	Promotion from the post of 'Assistant Forensic Digital Analyst' of Tripura State Forensic Science Laboratory who has completed 10(ten) years of service in the grade having requisite qualification, failing which by Direct Recruitment.
12.	If a D.P.C. exists, what is its composition:	Group-B, D.P.C.
13.	Circumstances in which TPSC is to be consulted in making recruitment.	As required under the **Tripura Public Service Commission** (Exemption from Consultation) Regulations, 1973.
14.	Repeal	Not Applicable

By order and in the name of the Governor

30/05/2023

(S. Chakraborty)
Deputy Secretary to the
Government of Tripura

ANNEXURE -A

SCHEME OF EXAMINATION FOR THE POST OF JUNIOR FORENSIC DIGITAL ANALYST (CYBER FORENSIC DIVISION), STATE FORENSIC SCIENCE LABORATORY, TRIPURA

Full marks: 200

Marks allotted for Interview: 15
Proficiency knowledge in Bengali/Kokborok: 5
Marks allotted for written Test: 180
Pattern of questions for written Test: Multiple Choice Question (MCQ)

There will be Negative Marks.

Distribution of marks for written Test:

Sl. No.	Items	Marks allotted
1	English Language	30
2	General knowledge	30
3	Subject matter (Cyber Forensics)	120

(1) Syllabus for English Language:

Question on English language will cover Synonyms, Antonyms, use of common Phrase & Idioms, use of appropriate Prepositions and Articles, Comprehension, Ordering of words in a sentence, Ordering of sentences, spotting of errors, use of appropriate and qualifying words etc.

(2) Syllabus for General Knowledge:

General knowledge with special reference to Tripura and North Eastern States.

(3) SYLLABUS FOR SUBJECT MATTER (Cyber Forensics):

Unit 1: Propositional (Boolean) Logic, Predicate Logic, Well-formed formulae (WFF), Satisfiability and Tautology. Digital Computers, Logic Gates, Boolean Algebra, Map Simplifications, Combinational Circuits, Flip-Flops, Sequential Circuits, Integrated Circuits, Decoders, Multiplexers, Registers and Counters, Memory Unit. Representation of Integers: Octal, Hex, Decimal, and Binary. 1's complement and 2's complement arithmetic. Floating point representation.

Unit 2: Programming in C: Elements of C-Tokens, identifiers, data types in C. Control structures in C. Sequence, selection and iteration (s). Structured data types in C-arrays, struct, union, string, and pointers. Object Oriented Programming Concepts: Class, object, instantiation. Inheritance, polymorphism and overloading. C + + Programming: Elements of C + + Tokens, identifiers. Variables and constants, Datatypes, Operators, Control statements. Functions parameter passing. Class and objects. Constructors and destructors. Overloading, Inheritance, Templates, Exception handling. Web Programming: HTML, DHTML, XML, Scripting, Java, Servlets, Applets.

Unit 3: Computer Networks: Network fundamentals: Local Area Networks (LAN), Metropolitan Area Networks (MAN), Wide Area Networks (WAN), Wireless Networks, Inter Networks. Reference Models: The OSI model, TCP/IP model. IP address and Mac address. Data Communication: Channel capacity. Transmission media-twisted pair, coaxial cables, fibre-optic cables, wireless transmission-radio, microwave, infrared waves. Lightwave transmission. Telephones-local loop, trunks, multiplexing, switching, narrowband ISDN, broadband ISDN, ATM, High- speed LANS. Cellular and Radio. Communication Internetworking: Switch/Hub, Bridge, Router, Gateways, Concatenated virtual circuits, Tunnelling, Fragmentation, Firewalls. Routing: Virtual circuits and datagrams. Routing algorithms. Network Security: Cryptography-public key, secret key. Domain Name System (DNS) -Electronic Mail and Worldwide Web (WWW). The DNS, Resource Records, Name servers. E-mail-architecture.

Unit 4: Database and SQL: E-R diagrams and their transformation to relational design, normalization-. SQL: Data Definition and Data Types; Constraints, Queries, Insert, Delete, and Update Statements; Views, Stored Procedures and Functions; Database Triggers, SQL Injection. Transaction Processing, Concurrency Control Techniques, Database Recovery Techniques, Object and Object-Relational Databases; Database Security and Authorization. data dictionary.

Unit 5: Data and File structures: Data, Information, Definition of data structure. Arrays, stacks, queues, linked lists, trees, graphs, priority queues and heaps. File Structures: Fields, records and files. Sequential, direct, index-sequential and relative files. Hashing, inverted lists and multi-lists. B trees and B + trees.

Unit 6: Operating Systems: Main functions of operating systems. Multi Programing, multiprocessing, and multitasking. Memory Management: Virtual memory, paging, fragmentation. Concurrent Processing: Mutual exclusion. Critical regions, lock and unlock. Scheduling: CPU scheduling, I/O scheduling, Resource scheduling. Deadlock and scheduling algorithms. Disk management – formatting, boot block, disk free space management techniques, concept of RAID. Protection and Security: Concepts of domain, access control, Security of systems- concepts, threats- Trojan horse, virus, worms etc, user authentication UNIX: The Unix System: File system, process management, shell variables, command line programming. Filters and Commands. Windows Operating Systems: Design Principles, System Components, Terminal Services and Fast User Switching; File System, Networking.

Unit 7: Software Engineering: System Development Life Cycle (SDLC): Steps, Water fall model, Prototypes, Spiral model. Software Metrics: Software Project Management. Software Design: System design, detailed design, function oriented design, object oriented design, user interface design. Design level metrics. Coding and Testing: Testing level metrics. Software quality and reliability. Clean room approach, software reengineering, reverse engineering..

Unit 8: Mobile Computing: Mobile connectivity-Cells, Framework, wireless delivery technology and switching methods, mobile information access devices, mobile data internetworking standards, cellular data communication protocols, mobile computing applications. Mobile databases-protocols, scope, tools and technology. M-business.

Unit 9: Computer Organization and Architecture : Introduction to basic structures and operational concepts, Instruction formats, Instruction execution, sequencing, Addressing modes, Stacks, Queues, Subroutines Concepts, Fetching and storing word from/in main memory, Register transfers, Operations, execution of a complete instruction, Basic concepts, RAM, ROM – different types, Characteristics, Cache memories, Performance (memory interleaving, hit rate etc.), Memory hierarchy -virtual memory – address translation, Secondary memories Input/output organization: memory mapped, standard (isolated) and linear selection techniques of I/O addressing. Data transfer through programmed I/O, interrupt and DMA I/O processors. Data transfer over synchronous and asynchronous buses; discussions on some standard interface buses.

Unit 10 : Digital Evidence storage devices, Order of volatility of Digital evidence, Cybercrime and types, Cyber Forensics, Basic rules for Cyber forensics, Collection and preservation of Digital evidence, Data acquisition methods, Forensic Imaging and cloning, Data validation, Hash Algorithms and hash value, Various file extensions and file signatures. Windows Registry overview, data recovery techniques. Windows Disks, Files and Partitions, Email tracing techniques, Social media analysis, Steganography and analysis methods.